



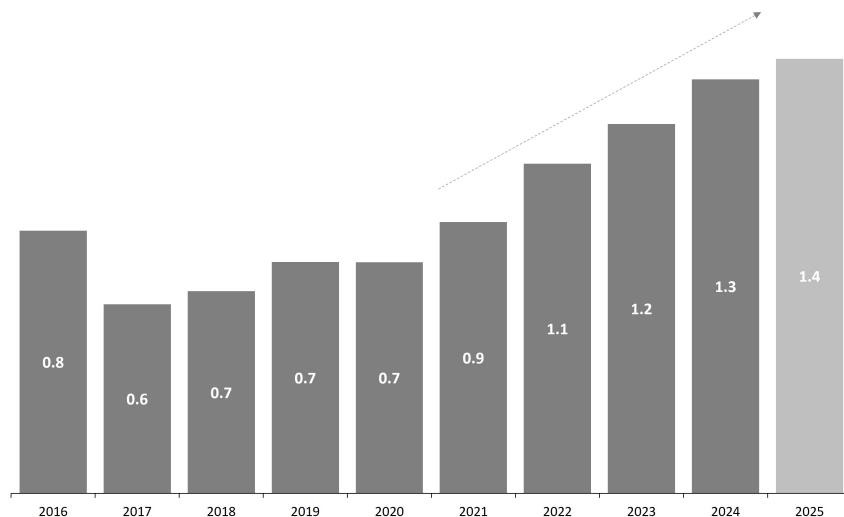
Strait of Hormuz closure risk puts spotlight on global oil and gas flows

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The recent escalation in conflict between Iran and Israel combined with US bombing of Iranian nuclear sites is set to have far-reaching implications for the future of energy security in the Middle East and Asia. As tensions rise, energy infrastructure, production stability and regional export routes face growing risks, with consequences that could affect global markets. With talks aimed at de-escalating tensions falling apart and production now under pressure, there is growing uncertainty around what happens next. More importantly, the closure of the Strait of Hormuz – a narrow waterway linking the Persian Gulf with the Gulf of Oman and jointly controlled by Iran and Oman – would likely disrupt global supplies, with around 20% of global liquids supply currently transiting the waterway, while it is also an important route for the Qatari liquefied natural gas (LNG) supplies. Rystad Energy analyzes how the conflict could affect Iran's oil and gas production, future projects and what it all means for energy markets around the world. In follow-up commentaries, we will also assess the potential impacts of the conflict on other regions.

While Iran has been able to increase oil supply despite being subject to sanctions for 12 of the last 15 years, it still struggles to attract financing and technical expertise from abroad. State-owned National Iranian Oil Company (NIOC) has long grappled with debt, which stood at \$70 billion in 2016 before dropping to \$49 billion in 2017 following the relaxation of sanctions. Debt levels have been mounting since the 2018 re-imposition by the US of sanctions under the first administration of President Donald Trump, and reached their highest levels last year. Our analysis of upstream activity shows Iran is likely to have the lowest level of investment in proportion to its proven plus probable (2P) reserves in 2025, compared to other major Middle East producers. To counter this, the country has until recently been engaging in dialogue with the US.

Figure 1: Ratio of NIOC's debt to Central Bank versus Iran's 2P reserves*



*Ratio is obtained by dividing NIOC's debt with Iran's proven plus probable (2P) reserves in Rystad Energy UCube
Source: Rystad Energy research and analysis

Recent talks

The US and Iran had been engaged in a renewed push to revive discussions around Iran's nuclear program. From April to the end of May, five rounds of talk were held, with a sixth one scheduled for 15 June. However, this fell through after Israel launched a surprise strike on Iran just three days before the scheduled talk.

During the previous US administration of Barack Obama, such negotiations had led to the signing of the Joint Comprehensive Plan of Action (JCPOA) in 2015. Sanctions were removed, and Iran achieved annual production levels of 3.8 million barrels per day (bpd) in 2018. The



US withdrew from the agreement when Trump came into the office in 2018, and production fell to 2.3 million bpd the next year as sanctions were reinforced. With the JCPOA set to expire in October this year, the ongoing talks gave a ray of hope for a similar agreement to be reached again. With the recent strikes on Iran's nuclear sites, however, the future of these talks remain unclear.

Production

Despite the sanctions, Iran has managed to increase production steadily in recent years. The country produced around 3.2 million bpd of crude oil and roughly 260 billion cubic meters of gas (Bcm) last year. The majority of this came from fields in their late life that are facing high annual decline levels. The production increase is attributable to multiple factors, including increased project awards to local contractors, an expansion in the so-called 'shadow fleet' of tankers suspected of carrying sanctioned commodities, and greater use of local currencies during export transactions. However, this upward trajectory now faces serious risks. With storage tankers among the targets, any surplus crude that continues to be produced will face significant challenges in being stored or exported. If the Strait of Hormuz is blocked and exports disrupted, as much as 1.5 million bpd of Iranian crude production could be at risk.

Figure 2: Iranian crude oil production

Thousand barrels per day

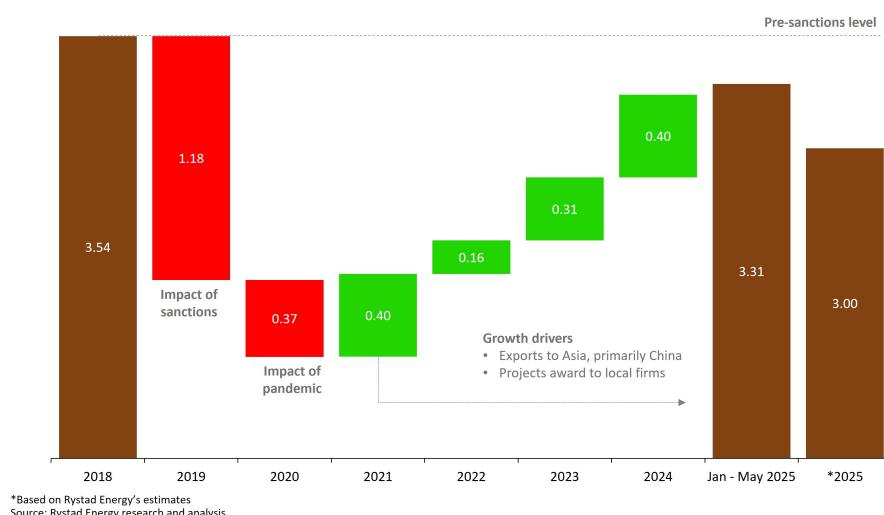
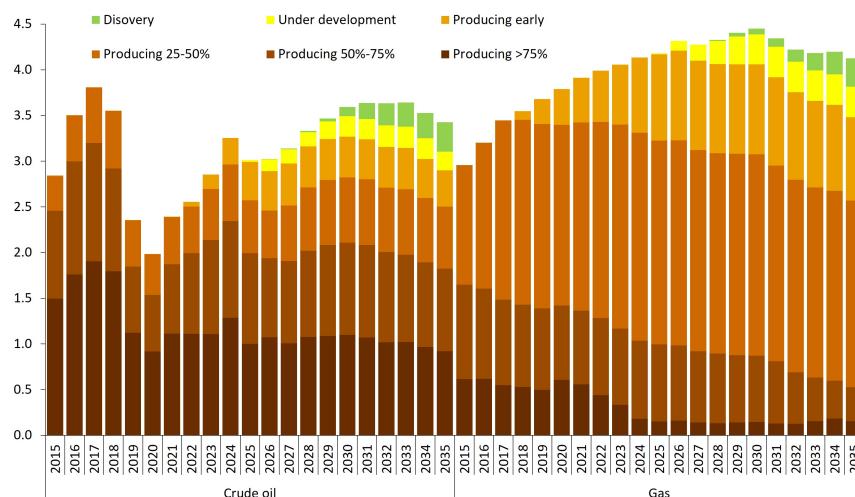




Figure 3: Iranian crude and gas production split by lifecycle
Million barrels per day

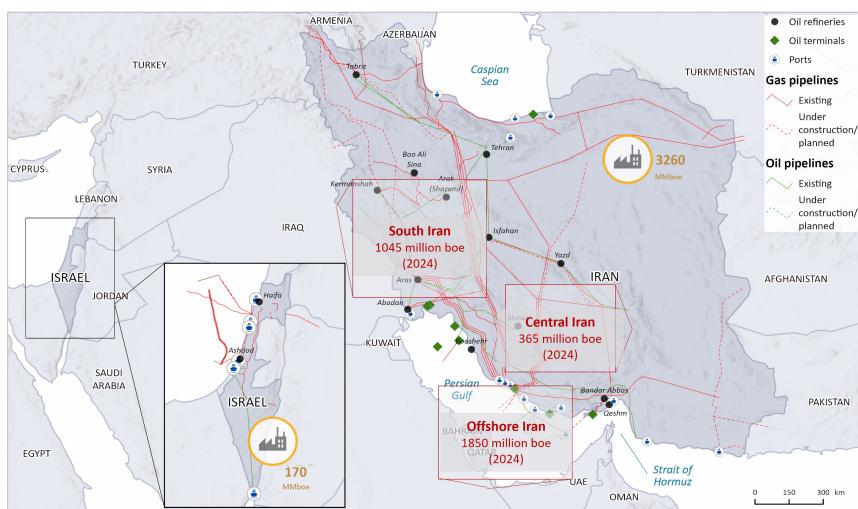


Source: Rystad Energy UCube

Oil and gas infrastructure targeted

In an escalation, two key gas-processing plants were targeted in Iran – one at Phase 14 of the South Pars field and another at the Fajr processing plant, both in southern Iran. In addition, three storage tanks were also struck. Iran's Petroleum Ministry confirmed 60% of gas production at Phase 14 has been suspended following the strike, affecting 10% of the country's total gas consumption. This marked the first time that Iranian oil and gas infrastructure had been targeted since this phase of conflict with Israel began in 2023.

Figure 4: Oil and gas infrastructure and average production in Iran and Israel

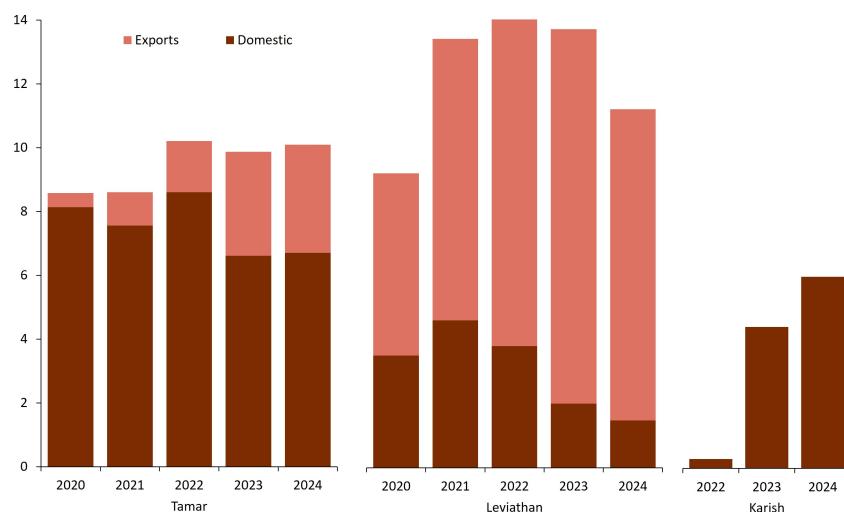


Note: boe = barrels of oil equivalent
Source: Rystad Energy UCube; Rystad Energy GIS Services

In a parallel move, Israel announced the suspension of production from the offshore Leviathan and Karish fields in the Eastern Mediterranean. The two fields collectively produce around 18 Bcm per annum (Bcma) of gas, which accounts for almost 65% of the country's total production. The only remaining producing field is Tamar, whose 10 Bcma of production is not enough to meet the domestic supply of 14 Bcma in case shutdowns are extended. The suspensions have impacted Israeli exports to Jordan and Egypt, with the latter relying heavily on such volumes to meet domestic demand.



Figure 5: Israel domestic supply and exports
Billion cubic meters



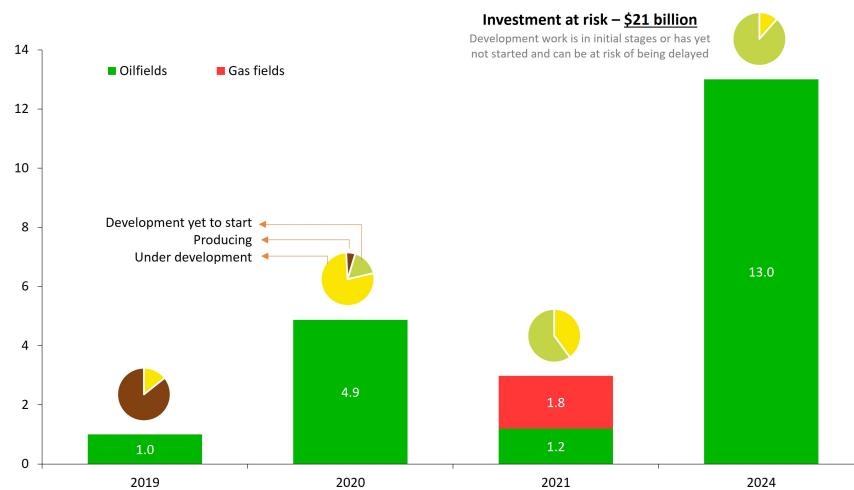
Source: Rystad Energy UCube; Rystad Energy research and analysis

Long-term risks

Iran has been working hard to maintain pre-sanctions capacity levels. With legacy oilfields declining at rates of 8% to 12%, Iran is heavily investing in brownfield projects to counteract these declines. These investments alone are, however, not enough to reach pre-sanction output levels. As a result, the country is also investing in new discoveries.

Ever since international oil companies left the country in 2018, Iran has been developing its oil and gas fields with the help of local contractors, which in many cases lack necessary funding and technology. Iran began a contract awarding spree in 2019, followed by additional rounds in 2021, 2022 and 2024. Last year alone, over \$13 billion in oilfield contracts were awarded, excluding the \$20 billion pressure enhancement project at South Pars. Development work for the 2022 projects is either under way or has not commenced, while work for all the 2024 projects is yet to start. Any further attack on petroleum facilities would inevitably delay these projects, potentially putting nearly 400,000 bpd of future crude production at risk on top of the damage inflicted on existing facilities.

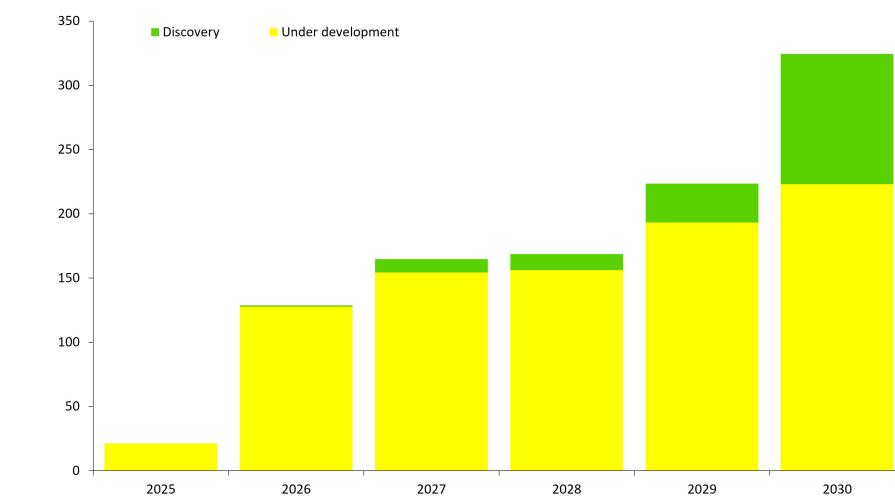
Figure 6: Iran's local contracts awarded since 2019
USD billion



Source: Rystad Energy UCube



Figure 7: Risked* Iranian crude production from ongoing/upcoming projects
Thousand barrels per day

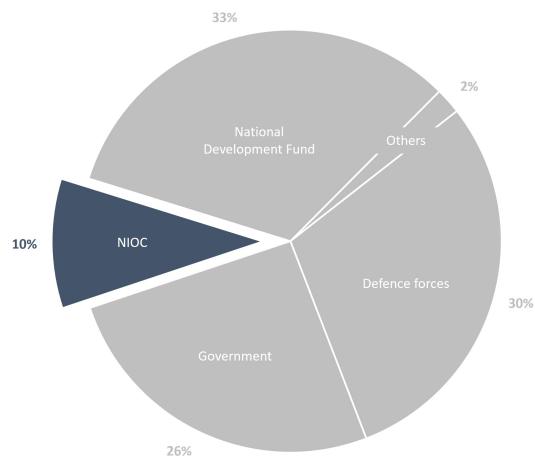


*Production loss if development works are forced to stop due to conflict

Source: Rystad Energy UCube

NIOC's small share of oil and gas export revenues is further contributing to its financial difficulties. The company, in charge of developing all the oil and gas fields in Iran, is entitled to only 10% of total oil and gas export revenues, insufficient to cover its costs. More than 30% of oil and gas revenues are earmarked for military spending, and while previous budgets directed some 40% to the National Development Fund, created to preserve current oil and gas revenues for the development of future generations, the percentage has been slashed in the country's most recent budget.

Figure 8: Share of different sectors in Iranian oil and gas export revenues for 2025-26



Source: Rystad Energy research and analysis

Strait of Hormuz

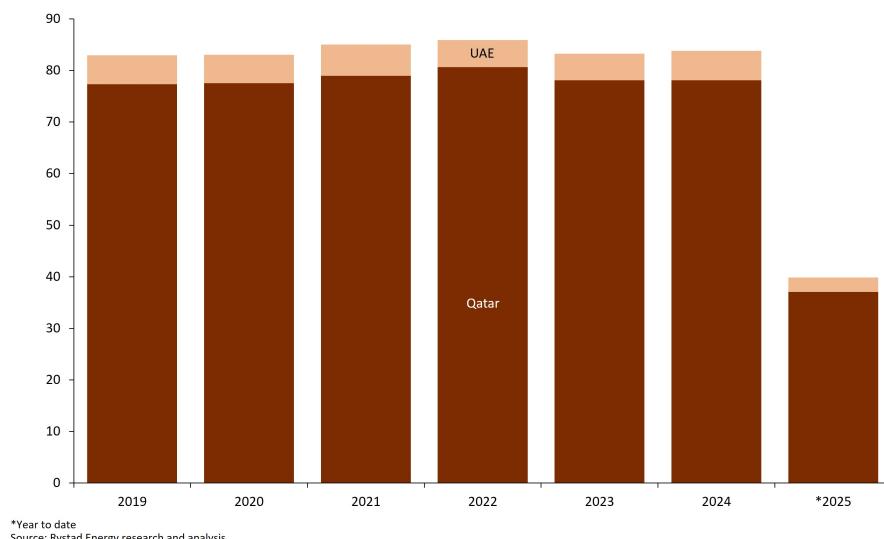
Iran's parliament voted on 22 June to approve the closure of Strait of Hormuz following US strikes that attacked three of its nuclear sites – Fordow, Natanz and Esfahan. Historically, Iran has used the threat of closure for leverage. Even during the Iran-Iraq War in the 1980s, many tankers in the Strait of Hormuz were attacked by both Iran and Iraq, but there was no closure. The conflicts were largely localized and kept the regional oil and gas industry unaffected. Now, however, the prospect of a full-scale closure no longer seems far-fetched.



The Strait of Hormuz – the only passageway for vessels to move from the Persian Gulf to the open ocean – handles 20% of global oil supplies. A closure would bring exports from Kuwait, Qatar and Iraq – which are entirely dependent on this route – to a complete halt. While Saudi Arabia and the UAE possess pipelines to bypass the route, their capacity is lower than their export volumes. Iran itself relies on the strait for the majority of its crude exports, suggesting any prolonged closure would be a double-edged sword and would also impact China, which is its biggest importer. In total, over 10 million bpd to 12 million bpd of volumes could be knocked off the market in the event the strait is closed.

The region also supplies LNG, predominantly to Asia, with some volumes also heading to Europe. While Qatar, the UAE and Oman all produce LNG, Omani supplies do not need to transit the strait. All cargoes from the UAE and Qatar LNG must pass through it, putting more than 83 million tonnes per annum (Mtpa) of LNG exports at risk. Qatar, which is the second-largest exporter of LNG in the world, relies heavily on these exports for its revenues. Such a closure would significantly impact its financials and lead to an increase in global spot prices.

Figure 9: Qatar and UAE LNG exports
Million tonnes per annum



*Year to date
Source: Rystad Energy research and analysis

Beyond the immediate supply risk, the entire region would be caught up with the conflict. Countries such as the UAE, Iraq and Kuwait are in the middle of ramping up their oil production capacity through large-scale brownfield and greenfield investments. Saudi Arabia is also investing in brownfield developments to maintain its current capacity of 12 million bpd. There are also gas expansion plans in place, the including Qatar's plan to increase LNG capacity to 142 Mtpa by 2030. [As non-OPEC production declines](#), these increased capacities are crucial for energy reliability, and such interruptions will trigger price escalations – and hence, recession fears – and at the very least, access to energy.



Figure 10: Oil and gas production targets for Middle East countries

Country	Oil production target in million bpd		Gas production target
Saudi Arabia	12 (2027)		60% gas increment (2030)
UAE	5 (2027)		Net gas exporter (2030)
Qatar	N/A		LNG export – 142 Mtpa (2030)
Kuwait	4 (2035)		2 Bcf/d (2030)
Iraq	6 (2029)		Reduce Iranian gas imports
Oman	N/A		Increase LNG capacity to 15.2 Mtpa
Iran	N/A		Unlock LNG capacity

Note: bpd = barrels per day; Mtpa = million tonnes per annum; Bcf/d = billion cubic feet per day
Source: Rystad Energy UCube

Oil and gas-importing nations in Asia, such as China, India, Japan, and South Korea, would lose significant import volumes, as a major portion of exports from these Middle Eastern countries is directed east. These importing countries will be forced to seek alternative sources, potentially hampering supply chains, driving up costs and disrupting the energy supply chain. Markets are also concerned about such potential escalations, which resulted in the price of Brent crude oil shooting up to \$78 per barrel following the escalation of conflict – the highest level for months. Brent prices may be further impacted depending on whether or not the strait is closed.

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